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MISCELLANEOUS.

Operable Meningitis.

BY HAL C. WYMAN, M.S., M.D., DETROIT.

Professor of Surgery in the Michigan College of Medicine and Surgery.

Read before the Golden Belt Medical Society, at Salina, Kas., July 11, 1895.

The almost uniformly fatal result of meningitis leads physicians to give the phenomena of the disease a great deal of attention. The changes observed post mortem have been especially noted, and on them surgery is now able to lay a foundation, which promises restoration to health, for those cases which are not already in collapse.

In meningitis we have a disease which, to use the common definition, is both traumatic and idiopathic. That is to say, some of its causes are clear and others are obscure.

That a blow upon the head or spine, a fracture, a laceration or contusion of the skull, vertebræ, or membranes of the brain or spinal cord may be followed by meningitis, is clear; but a meningitis resulting from extension of inflammation in organs adjacent to the membranous envelopes of brain and cord is not always easily traced. The operable types of meningitis are those in which the inflammatory process can be traced to an injury or to a disease of the mucous cavities of the skull. The therapeutic powers of an operation in the treatment of meningitis lie in the surgical phenomena known as drainage. The tendency to death from meningitis is encouraged by the retention of fluids and materies morbi within the osseous and membranous envelopes of the brain; therefore, a reasonable prospect of cure is assured by the performance of any surgical operation which secures the drainage of these envelopes, so that fluids and materies morbi are carried away. It is not necessary to recite cases in proof of these statements. The literature of today contains the histories of many such. In the selection of the particular case for an operation and the methods to be pursued in performing it are themes for discussion. Naturally, we want to know what proportion of cases of meningitis will recover if referred to medical treatment; but we must be very careful not to be guided by the statistics gathered from public institutions, because, in grouping cases in the statistical method of study, the individual cases are lost sight of and important facts upon which the necessity for the operation depends pass unnoticed. I can only speak of the cases which have occurred in my own practice and rules which have guided me in their treatment. The ideal case for operation may be exceedingly complex and the actual case be correspondingly simple. As a rule, I would say, do not withhold an operation in any case in which there is a history, distinct, of inflammation of the ear or of the sphenoidal or frontal sinuses, followed by convulsions or loss of consciousness, or both, with other symptoms indicating cerebral compression. I refer now, of course, to what we would call basilar meningitis. In any case of loss of consciousness, in which there has been an inflammatory disease of any of the mucous cavities of the skull immediately preceding, there is a strong probability that the loss of consciousness and other symptoms of cerebral compression are due to the accumulation of inflammatory products within the skull. In these cases I know of no remedy more rational than trephining the skull and draining the base of the brain at points

where inflammatory products are most likely to accumulate.

It is not necessary to wait for the development of unilateral symptoms, as a facial paralysis, ptosis, squint, or hemiplegia, for example, although the occurrence of any of these conditions before the loss of consciousness occurs adds to the certainty of the presence of inflammatory products and contributes to the selection of the place for operating the trephine. There are the phenomena said to be indicative of thrombus in the lateral sinus, which may, if not measured at their full value, confuse the physician and lead to delay in operating. It is said by some writers that a thrombus in the sigmoid or lateral sinuses obstructs the circulation in the ophthalmic vein, and, in consequence, there is œdema of the conjunctiva, with a varicose condition of all veins emptying into the ophthalmic vein; but my observations lead me to think that collateral circulation is oftentimes established through channels beyond the thrombus in the sigmoid or lateral sinuses, so that these symptoms rarely appear. Furthermore, there is, in all cases of cerebral meningitis, a combination of symptoms, a tout ensemble, which will lead the average physician to a prognosis, with considerable certainty, and when this prognosis is unfavorable and the history of the case shows that there is a probable extension of inflammatory processes from the mucous cavities of the skull, you may proceed to trephine with a prospect of success, based largely upon the length of time that has elapsed since the symptoms of inter-cranial trouble appeared. Delirium, in itself, need not prompt one to use the trephine, for we know that it very often results from a general condition of the blood, which feeds the brain cells. It may, however, be an associate symptom of great value.

When an operation is indicated, the selection of the field is sometimes difficult. But, if we remember that post mortem observations have shown us that meningitis most frequently results from disease of the middle ear, that a disease of the middle ear is to meningitis what an ulcerated appendix vermiformis is to peritonitis, we will naturally make our operation at the point in the skull which will most promptly drain that portion of the base of the brain adjacent to the middle ear. The anatomy of this region is somewhat confusing, but we can easily comprehend the existence of a posterior, of a middle and of an anterior fossa in the base of the skull, and we easily recognize the petrous portion of the temporal bone as the dividing line between the posterior and the middle fossæ. We can also recognize the tentorium cerebelli as separating the cerebellum and the cerebrum. We can reach the middle fossa easily through an opening made behind the zygoma of the temporal bone, and the posterior fossa through an opening made above and behind the external auditory meatus. Through this opening into the posterior fossa the cerebellum can be reached, when a little care is taken to enlarge the opening made by the trephine. The details, however, of this work must recognize the proximity of the lateral and sigmoid sinuses, and also the difficulty of determining their exact location by any marks upon the outside of the skull. It is, therefore, very important in opening the cranial cavity in this region that the instruments be used in such a way as to insure the removal of bone without damage to the subjacent membranes, and, when the opening is once made, by means of the rongeur, it can be enlarged in any direction without further danger of wounding these blood vessels. Some writers speak rather flippantly of the ease with which a hemorrhage from these sinuses can be controlled by plugging with gauze, but my advice is to proceed with great caution in the removal of bone. In cases, however, in which a thrombus of the lateral or sigmoid sinuses exists, the danger of hemorrhage is much lessened. In dealing with the diseased membrane much will depend upon what is learned by the exploring finger, passed through the opening in the skull. Abnormal conditions will readily be detected by it, and if openings are indicated, as is the case in some instances in which the inflammatory process involves the arachnoid spaces and the brain itself, the opening in the dura should be made very

small and increased in size by dilatation, by means of forceps. The use of drainage instruments, tubes or gauze, will depend upon the quantity and location of the fluids to be removed; but, as a rule, little should be done after the membranes have been reached or opened. If a cavity containing pus be found, a short drainage tube, long enough, however, to insure the patency of the opening in the membranes, should be inserted. A longer one may do harm.

The after treatment of cases which have been submitted to operation requires that the drainage be maintained constantly, as long as morbid fluids come away, and care must be taken by means of sterilized gauze and cotton and properly fitting bandages to the head that infection of the wound be prevented. Constitutional treatment by the use of intestinal eliminatives, small doses of calomel, followed by salines, would generally be needful, and, aside from this, the patient should get iron and tonics and the foods which contribute most advantageously to the repair of the wound.

Diphtheria.

BY H. O'DONNELL, M D., ELLSWORTH, KAS.

Prepared for the meeting of the Golden Belt Medical Society, held at Junction City, Kas., January 3, 1895.

In the category of disea e diphtheria stands prominently forth as regarded by the laity with more dread and horror than any other affliction to which human flesh is heir.

"Scarlet fever and diphtheria are like the heads of Janos—harmless, friendly faces in sporadic cases and in mild epidemics, but terribly warlike faces in malignant ones."

The milder types of the disease are forgotten by the public; the name diphtheria is fixedly associated in its mind with those sad pictures of whole families of blooming children cut down by this fell destroyer in its most malignant form.

Great is the responsibility imposed upon the physician whose professional duties bring him in contact with the disease. Not alone as regards treatment, but even more especially in the prompt detection, diagnosis and isolation of cases however mild, and last but not least, in exercising the greatest caution that he himself may not become a medium for the transmission of the infection.

In a limited paper it is only possible to refer briefly to the more important features of the disease.

I shall therefore endeavor to condense the following propositions which embrace, I think, the now generally accepted theory of its etiology and pathology, certainly the one most in accord with clinical experience:

1. Diphtheria is caused by a microbe discovered by Klebs, further investigated by Loeffler, hence called the Klebs–Loeffler bacillus.

2. The action of this bacillus is merely local; it produces a characteristic local inflammation, accompanied by the formation of a pseudo-membrane.

3. As a result of this local action of the bacillus there is formed a chemical poison (atoxalbumen), which absorbed into the blood and lymphatic system produces the train of constitutional symptoms characteristic of the disease.

True, many competent observers claim that a pseudo-membranous inflammation can be produced by microbes other than the Klebs-Loeffler; J. Lewis Smith, of New York, and other eminent authorities apply to this form the term "pseudo diphtheria;" the same essential points, however, remain—the local action of the micrococci, the formation of the membrane and the absorption of a poison produced locally by those cocci, probably, however, not so virulent as that produced by the Klebs-Loeffler variety; the clinical facts are also parallel, as this so-called variety of the disease is contagious, dangerous to life in severe cases, and presents identical local and constitutional indications for treatment.

I do not propose to describe minutely the diphtheritic pseudo-membrane, nor to attempt any classification of the disease founded upon the different forms in which that pseudo-membrane may be found to exist. I consider the most convenient clinical classification, the three varieties most fre-

quently encountered, named as to situation of the local manifestation of the disease, and in order of their frequency, pharyngeal, nasal and laryngeal, bearing in mind the fact that other parts of the body: e. g., the cutaneous surface, eye, ear, vagina, etc., may be attacked by a diphtheritic process.

The average duration of the incubation period varies from two to five days; as a rule premonitory symptoms are not wanting—headache, possibly chill, and a feeling of general malaise are complained of.

The throat at the onset presents symptoms of simple catarrhal inflammation with some difficulty in swallowing—this latter symptom, however, is not constant—the voice is generally hoarse, neck stiff, adjacent lymphatic glands of neck sore and swollen; a rash resembling that of scarlet fever frequently appears, but it is not by any means an invariable symptom.

Soon a white membrane appears, which in typical cases covers the posterior wall of the pharynx, the tonsils and soft palate; at first the color is white, but after a short time it changes to a yellowish white, or even dirty gray color.

That very fatal form in which the disease invades the larynx is seldom primary, usually secondary to the pharyngeal variety, and caused by an extension of the membrane downwards into the larynx, giving rise to all the distressing symptoms of diphtheritic laryngitis; this form of the disease, when primary, is claimed, I believe correctly, by numerous authorities to be identical with true or membranous croup; the peculiar disagreeable smell which emanates from a diphtheritic throat is, I think, characteristic and not found in other forms of sore throat.

The most important complications are albuminuria and cardiac failure; the latter often develops suddenly, without any premonition, and proves rapidly fatal.

Paralysis also often follows this disease, especially affecting the soft palate; any part of the body may, however, be attacked; as a rule the prognosis in this last complication is good, the parts affected regaining their normal condition in from four to eight weeks.

The diagnosis of a typical case of diphtheria presents no difficulty, but in those benign cases where possibly the clinical signs are not sufficiently marked to establish a positive diagnosis, we often find considerable difference of opinion among physicians; some are prone to call every case of sore throat diphtheria, others again refuse to admit its diphtheritic nature, unless the mortality and physical signs preclude the possibility of an error in diagnosis.

It is well in such cases to exercise extreme caution and wise discrimination. When we see several members of the same family become successively afflicted with some form form of exudative angina, it is strong presumptive evidence that it is of an infectious nature, and although the microscope alone may be able to establish beyond question the identity of the disease, even were we all expert microscopists much time would be lost in pursuing such a course, and in the meantime the disease may have been communicated to others, possibly in a much more malignant form, and the suffering and possible fatality be laid at the door of the physician who waited to be confronted with the Klebs-Loeffler bacillus, and did not in time give the public the benefit of the doubt.

At the present moment a discussion upon the treatment of diphtheria may not be very opportune; we are all, as a profession, sanguine that the antitoxine treatment may revolutionize medicine as far as the treatment of this particular disease is concerned, but as its success as yet has not been absolutely proven, we must content ourselves, for a short time only, we hope, with employing other measures in conjunction with it.

Accepting the proposition that the disease is primarily local, its treatment may be most conveniently considered under the head of local and constitutional; operative treatment I shall not discuss.

As local applications, innumerable have been the remedies suggested and tried; I believe in the efficiency of antiseptic sprays to the entire exclusion of irritating astringent or caustic applications; any antiseptic solution of proper strength properly applied will do good. Personally, I prefer peroxide

of hydrogen (Marchand's), one part to two or four of water used as a spray at intervals varying from half an hour to one or two hours, according to the severity of the case.

Should the disease invade the nasal cavities, they should also be sprayed; we should be careful to select an atomizer which throws a fine spray and not a stream like a hose.

I have also observed much benefit derived from the inhalation of steam from hot water in which lime had been dissolved; this latter procedure appears to exercise somewhat of a solvent action.

The forcible removal of the pseudo-membrane is to be condemned unless it has sloughed off and become partly detached; in such a case it should be removed and to the denuded mucous surface is to be applied a powder composed of one part salicylic acid and seven parts sub-nit. bismuth.

The main indication for constitutional treatment is to support the vital powers, and to counteract the vitiating effect of the absorbed poison upon the blood and general organism.

Appropriate nourishment and judicious alcoholic stimulation I consider of the first importance; owing to the difficult deglutition in most cases, liquid nourishment must as a rule be employed; milk alone, and in the form of egg-nogg should be given freely and at regular intervals. It is wonderful how much stimulant can be borne by a diphtheritic patient, especially in those cases where the disease assumes a septic type.

Both nourishment and stimulants should be given at regular intervals from the very onset of the disease; regarding the proper amount of stimulant, no definite rule can be laid down, as the pulse of each individual case must be made its own index.

If it is found impossible, owing to the severity of the case, to administer nourishment in the usual way it must be given per rectum.

Regarding internal medication the tinct. ferri. chlor. in as large doses as the stomach will stand, and the bichloride of mercury in small doses are most likely to be attended with beneficial results, especially the former. I have failed to observe any benefit derived from the administration of chlorate of potassium.

I consider the foregoing the main indications for treatment with a due regard to any complications or special symptoms which may appear and need to be met with appropriate medication.

Should the pyrexia be great, it can be controlled by sponging the body with tepid water or by small doses of antifebrin; I have yet to observe any untoward symptoms produced by the proper administration of this drug. Indications of cardiac failure should be met with an increase in the amount of stimulants exhibited; by strychnine hypodermatically, and nitroglycerine.

Always bearing in mind the possibility of such a complication, the patient should be kept perfectly quiet in the recumbent position.

The nephrites which sometimes presents itself as a sequela must also receive special attention.

True, too often all treatment proves unavailing, yet until the ardently hoped for time arrives when we can with certainty cope with this disease, a thorough, systematic, diligent adherence to a course of treatment somewhat similar to that which I have here briefly outlined may not prove altogether unsatisfactory.

THE following is clipped from an agricultural paper. It may be a good prescription for a horse, but we would hate to try it on a friend: "Your horse probably has diabetes in a mild form. Take iodine crystals, 1 ounce; iodide of potassium, 4 drachms; water, 12 ounces; mix. Give one ounce in a pint of water twice a day for two days, then give it once a day till done, unless the urine is checked sooner."

IS IT A LIBEL?—God made the earth in six days and then rested; then he made man and rested again. Then he made woman, and since that time neither God nor man has had a rest.—*Medical World.*

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W. E. McVEY, B.S., M.D., EDITOR.

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Topeka, Kansas, Saturday, July 27, 1895.

The Four-Year Course.

Attempts on the part of medical colleges to raise the standard of requirements ought not to be discouraged by the profession. The physician who has practiced for ten years knows only too well how inadequate his two years of lectures were, and when he has practiced twenty years he realizes more than ever that he was poorly equipped for the work before him after his two years' course. The fact that a great many of the greatest men in the medical profession were two year graduates, argues nothing against a longer term. It was not the two-year course, but their own energy and effort. How much easier they could have succeeded or how much farther they might have advanced had they spent more time in the preliminary work? We have heard very few men speak other than praise of the present effort toward advancement. It certainly can be no hardship to the student who is really interested in the subject and devoted to his profession to spend four or even six years in preparation. The men who have made the greatest success in medicine are those who begrudged no length of time spent in the study of its various branches. How many two-year graduates are there in this State today who feel that they are poorly equipped in many of the elementary branches of medicine.

There is another feature in the lengthened course that is of most importance; that is, the additional time allowed for clinical work. A great many students have been graduated in medicine who have never seen a case of obstetrics and who have never made a digital examination. These things must be taught the student before he is allowed to begin his practice, but it is safe to say that the two-year graduates have been compelled to get virtually all of their practical knowledge after graduation.

The four-year course is a benefit to the student and to the physician. Let us give it our earnest support.

Child Insurance.

It may be supposed that parents are all sufficiently devoted to their offspring to protect them from all suffering and danger if possible, and from such standpoint it is a very meritorious ambition to make provision for a decent burial when they die. Insurance companies in taking advantage of this ambition cannot be accused of any bad motives, and yet the results are somewhat suspicious. The greatest volume of business in this line is done in the large cities and the people among whom this kind of insurance is most popular are usually of the lowest and most degraded class. There are people who for $50 would not hesitate to dispose of one of their own children. There are others not quite so degraded who, while

they would not violently destroy life, would with such a prospect neglect to give the invalid child that attention necessary to save its life. There is a large profit to the company from this class of business, and they are not over cautious about the character of the risks they take. For a child under 12 years of age but few questions are asked and those are answered by one of the supposed parents. No examination is made, and it is a very simple and easy matter to substitute one child for another. There can be no question as to the possibilities of danger in this kind of business, and it is doubtful if the benefits arising therefrom will in any way counterbalance the possible evils. It is a speculation on both sides: the beneficiary is speculating on the death of the insured and the company on a year's expectancy. In some States it is prohibited by law, and it would certainly be safer and wiser, unless the companies take more carefully into consideration the morality of the beneficiary, to prohibit it in every State. A man may speculate on his own demise for the benefit of another, but we doubt the policy of his speculating upon the death of another individual for his own benefit. It opens a vast field of temptation in which the weaker and vicious minded are apt to fall.

Some New Theories of Digestion.

National Medical Review.

Nor a number of years it was our privilege to be able to give almost exclusive attention to the study of physiology. Nothing can be more fascinating either to pupil or teacher. During all this time, and even up to the present day, we had to believe that "The principal object of the saliva is to moisten the food and thus aid mastication and deglutition." And yet, we had to face the fact that an enormous quantity of saliva was secreted every twenty-four hours. It appeared almost like a waste of the forces of nature. We had to believe that the moment this saliva reached the stomach it became inoperative. But now all this is about to be changed. Although Freirichs came to the conclusion a number of years ago that salivary digestion continued in the stomach, yet his work was practically lost sight of. Now Dr. J. H. Kellogg, of the Battle Creek Sanitarium, has just published the report of some extensive experiments in his Laboratory of Hygiene, on starch digestion. Dr. Kellogg examined the contents of the stomach, after a test meal, in 4,875 cases. In 669 of these cases he found the starch had been completely converted into sugar. Only in 1.8 per cent. of the cases did he find there was little or no conversion of the starch. This certainly must be accepted as conclusive, and hereafter we must teach that the digestion of starch takes place in the stomach by the aid of the saliva ferments. Clinically this will be of great value and must result in a number of changes in our ideas of diet.

It is only within a few weeks that a chemist of Brooklyn, New York, Prof. E. H. Bartley, published an article in the New York *Medical Journal*, setting forth the dangers of having digested starch in the stomach. Our readers may recall the fact that a number of years ago a committee of American chemists were asked to report upon the dangers of taking a pre-digested starch into the stomach. Glucose was becoming such a generally distributed article, and was so largely used in the manufacture of confectionery that this committee was asked to report upon its effects on the system. The report was both exhaustive and conclusive that no deleterious effects would follow its use, even in large quantities. But Prof. Bartley has recently taken exception to this report. This is a very important question, for it is a fact that to-day the best candies in the world contain a large amount of glucose; while the most popular beer on the market has recently been shown to contain a larger proportion of glucose than any other brewed in this country.

It is very interesting to analyze some of the statements of Prof. Bartley; for instance he says that milk sugar and cane sugar are "intended" as foods in preference to grape sugar, because the former require digestion

before they can be absorbed. From this it is safe to reason that the more difficult a food is to prepare for absorption, so much the more was it "intended" as a food: therefore, boiled pork and cabbage were "intended" as foods in preference to the more easily digested eggs and milk!

Prof. Bartley then speaks against cooked fruits, jellies, preserves and fruit pies; because, he says, the cane sugar is changed into glucose by heating it with the acid fruits. As is well known "prolonged boiling" with an acid is necessary to make this change; while it is a practical fact that the housewife only brings her pears and peaches to a boil. Prof. Bartley further declares that the reason why some persons can eat raw apples "without stint and without after distress," and yet "cannot eat apple pie without distressing after-effects," is because the latter contains this inverted sugar! This is almost ludicrous. It occurs to us there is more difference than this between ripe, raw apples and the average apple pie with its historic crust! An equally absurd illustration is where he declares, "some persons can drink lemon juice and water, but are sickened by lemonade or lemon pie." As if lemonade were cooked! For he declares that it is the heating with the acid which changes the sugar into glucose; therefore, he must always take his lemonade "after prolonged boiling!" While lemon pie, it occurs to us, has something more in it than digested starch to make it indigestible.

Prof. Bartley is evidently averse to the "sweets," for he deals the candy manufacturers a death-blow. The professor relates instances of persons who were made ill by eating candy containing this variety of sugar, and whom he restored to health by refusing them all articles containing sugar, and by giving them "pepsin and hydrochloric acid with laxatives." This is like curing a man of some severe pain simply by combing his hair (and by the use of hypodermic injections of large doses of morphine)!

But this article is written with the view of showing how easily any number of theories may be overthrown when all the facts are made known. Prof. Bartley says that digested starch is absorbed too quickly while in the stomach, and thereby "may prove too great a task on the liver," and "the blood may be overcharged with dextrose." The professor reasons that when milk sugar or cane sugar is taken it is digested below the stomach, and there more slowly absorbed. The whole drift of his article is to frighten those who take a pre-digested starch for fear of causing diabetes!

In the light of the recent investigations of Dr. Kellogg, the absurdity of any such view is at once apparent. We now know that nature herself is digesting our starchy foods in the stomach, and that if these digested starches, or if this glucose, could in any way cause diabetes we would ere this have been a race of diabetics.

For a long time there has been a growing sentiment throughout Germany that diabetes has not been properly treated. Hirschfeld says he believes that diabetic coma is favored by the exclusion of carbohydrates in the diet. Schmitz allows his diabetic patients a small quantity of albumen, while he orders the free use of food containing starch, and fat in large amount. Grube impregnates the system with the carbohydrates. Williamston, of Manchester, says that home-made bread is much better than especially prepared diabetic bread. A number of American physicians are following out this line of treatment with better results than they have had heretofore.

In the light of all this we must conclude that saliva continues its action on starchy foods in the stomach until nearly, if not all, the starch is changed into glucose; that glucose is simply a normal product of digestion, and no more injurious than a digested proteid; and that the treatment of diabetes is bound to undergo a marked change in the near future.

REMEMBER that we will furnish you the JOURNAL for one year and Helbing's Modern Materia Medica for $2.50.

The Golden Belt Medical Society.

The Golden Belt Medical Society met in regular session in the parlors of the National hotel, in Salina, Kas., July 11, 1895. President Hazlett called the afternoon session to order promptly at 3:30 o'clock.

The minutes of the last meeting were read and approved.

No other business coming before the society, and the reading of papers being called for, a carefully prepared paper entitled "Operable Meningitis," by Dr. Hal C. Wyman, of Detroit, Mich., was read.

The paper was an able one and fully covered the ground indicated by the title.

Thorough discussion followed, indulged in by Drs. Lindsay, Sheldon and Dewees.

Next came a paper by Drs. J. T. Eskridge and Edmund J. A. Rodgers, of Denver, Col., under the caption of "Probable Septic Phlebitis of the Sigmoid Sinus."

Long discussion followed the reading of this paper, participated in by Drs. Lindsay, Sheldon, Dewees, Murphy, Searl, Clement, H. B. Felty, Lynde and LaFevre.

On motion the society adjourned to meet at 7:30 o'clock P.M. at the same place.

The evening session being called to order, the secretary, in the absence of the author, read a paper from the pen of Dr. Leonard Freeman, of Denver, Col., on "Vulvo-Vaginal Anus—The report of case."

Dr. Freeman's paper was discussed by Drs. Sheldon, Dewees, Harvey and Murphy.

This was followed by a very interesting extemporaneous talk on, and the exhibition of pathogenic bacteria by Mr. R. N. Gorden, of Abilene, a second year student of Michigan University. Mr. Gorden indicated a thorough knowledge and appreciation of his subject, and the society an eager interest in the theme.

On closing Dr. Harvey moved that a vote of thanks be tendered to Mr. Gorden for his kindness in appearing before the society. Carried.

Dr. E. B. LaFevre, of Abilene, exhibited a stomach removed post mortem, showing a typical simple perforating ulcer, and Dr. Hazlett gave the history of the case from which the stomach was removed.

Discussion followed, Drs. Winterbotham, Sheldon, LaFevre and Mr. Gorden taking part.

Dr. E. E. Hazlett, of Abilene, presented "Triplets," miscarried at the sixth month.

Reports of cases being called for, Dr. Sheldon, of Topeka, reported a case of "Castration for Enlarged Prostate," and also a "Probable Case of Melano-Sarcoma." Discussed by Dr. LaFevre.

On invitation of Dr. Searl, and motion of Dr. Harvey, the society adjourned to meet in Solomon City, October 3, 1895.

The following members and visitors were present during the sessions: Drs. Dewees, Winterbotham, Harvey, Lynde, Clement, Murphy, Searl, LaFevre, Hazlett, H. B. Felty, Hawthorn, Sheldon, Lindsay and Mr. Gorden. Respectively,

E. B. LAFEVRE, *Secretary*.

Permanganate of Potassium in the Treatment of Pulmonary Tuberculosis.

New York Medical Record.

In 1885 I employed this drug with most gratifying success in two cases of "butcher poisoning." In both cases a quite slight cut on the hand had produced several great swellings along the hand, fore and upper arm, and there was a copious discharge of pus. Washing the wounds with a solution of permanganate of potassium and covering them freely with iodoform produced little effect. On the eighth day in one patient, and the tenth day in the other, chills occurred. I then began the use of potassium permanganate, giving a drinking-glass of a light red solution three times a day. The next day there was a very considerable change for the better, shivering had ceased, appetite and sleep had come back, and I was justified in considering both patients out of danger. This convinced me that permanganate of potassium is not only good for snake but for "butcher poisoning" too. I hope it is equally good for poisoning derived from dissections.

In March, 1893, I took I. B——, a phthisical boy of sixteen years, to Lakewood. I had treated him for two years. The boy had cavities on both sides and was so reduced in health and strength that in order to come to the ferry he only could use the horse cars, being unable to climb the stairs of the elevated railroad or to stand the shaking of a carriage. In Lakewood we stayed at a farm house standing by itself on a hill, with well ventilated rooms. In the first five days no improvement could be observed. The patient continued feverish, coughing, weak, rather sleepless, and perspiring at night, the usual means having failed to help; creosote was given, but after being used for several days was refused by the patient. I gave him then a drinking glass of a light red solution of permanganate of potassium half an hour before breakfast, and a solution of ten grains of salicylic acid before going to bed on eight succeeding days. I consider the latter far superior to quinine in tuberculosis, as it not only does not interfere with digestion, but rather promotes it.

A couple of days later the patient felt much better and could go out into the open air without feeling chilly. Eight days after commencing this treatment the patient enjoyed his meals—ate three eggs for breakfast, slept well, did not sweat any more, and was in excellent spirits. On the fourteenth day of his stay in Lakewood he was able to escort me to the depot and to walk back without discomfort—a distance of a mile and a half. The pulmonary cavities were then almost healed, his appearance and face looked surprisingly well.

In two other cases of less grave tuberculosis I experienced the same good effect with the same treatment. The fourth case was a combination of influenza with symptoms of tuberculosis. An hour and a half after breakfast the patient, C. B——, took a small drinking glass of a dark red solution of permanganate of potassium, five times a week, and a solution of ten grains of salicylic acid before going to bed. The patient recovered quickly, but on account of relapses produced by her mode of living, I had to repeat this treatment several times, which always was beneficial to her.

New Treatment for Frcature of the Patella.

New York Medical Record.

I think I cannot better demonstrate the treatment which I am about to recommend than to cite my first case.

Mary C——, aged twenty-five, negro, farm hand. Admitted December 27, 1894. Diagnosis: Fracture of both patellæ. This patient was brought into the hospital supported by a man under each arm, unable to walk or stand without assistance. About the 1st of May, 1894, while walking with a child in her arms, she stumbled and fell backward, and was unable to again resume the erect posture until aided. The physician who was called in dressed a fracture of the left patella, by what method I am not aware, but the patient was permitted to walk after the first week, with one crutch and no dressing save a dry roller bandage applied about the knee. This crutch she continued to use until December 24th, when, while stepping from the door to the ground, a distance of about eighteen inches, with the sound limb in advance, the knee gave way and she had a second fall. Three days later I saw her at the hospital, with a recent fracture of the right knee and a fracture with ligamentous union of the left. The fragments of the old fracture were separated three inches. Having procured from a hardware store two slender ordinary screws, one-half inch in length, we were ready to proceed with the operation. I first boiled the screws a half hour, and then placed them in pure carbolic acid for another half hour, then in a carbolized solution with the instruments, to remain until used.

After the usual preparation on the previous day, with an antiseptic dressing applied about the leg, on the day of the operation, taking every antiseptic precaution, I selected the limb with the old fracture to employ the treatment which I am about to detail, deeming this the most unfavorable for a good result. The leg having been flexed on the thigh to a little less than right angles, I made a transverse incision through

the skin between the fragments, extending from the outer to the inner condyle. I then dissected back the integument, laying bare the fragment both above and below, as well as the intervening ligament. The ligament was next removed, and the edges of the bone well denuded. Then with the drill I slightly punctured each fragment about its middle, and with an ordinary screw driver inserted a screw in each fragment until within one turn of its full length. The leg was now extended, and after having my assistants press the quadriceps extensor from above downward I was able to bring the fragments of bone into apposition, and with a silver wire applied around the screws by the figure-of-eight method, to keep them in contact. The integument was next brought over and sutured, and the leg dressed by full extension with a suitable splint beneath and a dry roller bandage applied about the thigh from above downward, also one applied about the leg, with a third figure-of-eight bandage applied tightly about the knee, the latter bandage having been disturbed but once during eight weeks. I prefer the figure-of-eight to the all-round method of applying the wire, because it prevents to any very great extent the ducking of the heads of the screws, which could be distinctly felt beneath the skin. The figure of-eight bandage depresses the ligamentum patella and quadriceps extensor tendon and brings the fragments together throughout its entire depth. My idea was to inject cocaine over the head of each screw after the fracture had healed, and by unscrewing to withdraw them, but on attempting this I found that they were encysted and it could not be done. I think in my next case I shall not insert them so deeply. The result secured was perfect, with no impairment in motion of the joint. The fracture of the right leg, though a much more favorable case, was treated by another method, and the result was not nearly so good.

WANTED.—A set of Reference Hand Book. Any one having a set and wishing to dispose of it, address this office.

Brouardel on the Medical Profession.

Maryland Medical Journal.

One of the great questions of the day undoubtedly is, What shall we do with our sons? In the profession with which we are more immediately concerned there are at the present moment close on 33,000 gentlemen with British qualifications practicing the science and art of medicine in all parts of the world, but chiefly within the narrow limits of our own small island. The plethora of alumni in our schools is truly alarming, and yet we have cause to congratulate ourselves that matters in this respect are not so bad with us as they are elsewhere. In the United States, for instance, the medical student roster last year was said to contain no fewer than 38,850 names, being an augmentation of more than 5,500 since 1892. In France the overcrowding of the medical schools is also excessive, but in this connection we cannot do better than quote the remarks delivered by Prof. Brouardel at a recent meeting of the Association des Medecins du Departement de la Seine:

"Two years ago I drew your attention to the fact that the number of medical students was increasing rapidly. The augmentation still continues unabated. In all the French faculties our future confreres are twice as numerous as they were ten years ago. The same kind of thing is going on in Germany and likewise in England. Various causes have been invoked in explanation of this state of affairs; many people thought that the law regulating military service was to blame in the matter. There is no reason whatever for this supposition. The laws have not been altered in Germany or in England, and yet the rate of progression remains the same. In France the female midwifery candidates, who have nothing to do with military service, have doubled their numbers in the last five years. For my part I am convinced that it is the publicity accorded to the achievements of science which is responsible for the illusory ideas entertained by heads of families. Day by day in their newspapers they see the great importance

that on all sides is attached to public health, civil and military, and logically enough imagine that the persons charged with the solution of the great problems involved receive a proportionate compensation. They conclude that their offspring will derive both honor and profit while pursuing this grand career. They would be much astonished if any one were to point out how the efforts we make to render houses wholesome, to root out epidemics, to improve medical charities, all have the effect of narrowing more and more the field wherein the medical man was formerly wont to garner a meager harvest. Now, in ten years' time the number of reapers will have doubled. If the number of medical men has doubled, the number of unsuccessful practitioners will have increased threefold."

Constipation and Reflexes.

Dr. Curry, in Medical Tribune.

The alimentary canal has been a fruitful field for medical men since mankind acquired sedentary habits and became addicted to a vicious medication. Much as has been written upon this subject, I feel that there is much more to be said which may be of profit to some who rarely think of this part of the body except in connection with physic. Allingham says, in his work on diseases of the rectum: "That rectal diseases are the most common that affect civilized humanity, and that they are very rarely found in barbarous countries." Thus we should infer that civilization, while it presents all the better elements of society and possesses social features the most desirable to mankind, has yet to suffer physically the pangs of the d——d for our promotion in civilization.

Text books on physiology state that the rectum is usually found empty in health. My observation in the treatment of women usually is, where uterine disease exists that constipation prevails. Thus fæcal retention and pelvic disease bear to each other a somewhat reciprocal relation. The intestinal canal, evidently, was not intended as a receptacle for excrementitious matter only, but for further digestion and an avenue for its discharge. Yet fashion, that frail and sinful goddess of indolence and procrastination, has so fixed itself upon our race that the majority of women have lame backs and constipated bowels in consequence.

Constipation to the heroic doctor is a great bugbear, to our "infinitessimal" friends, a matter of so slight importance as to be hardly worty of notice. I feel that each err, that both are extremists. While I do not believe in active cathartics as a rule, yet I do think an impacted rectum can be the means of propagating many serious ills.

The cause of rectal indolence should have the same careful inquiry as we would give to neuralgia or paralysis. Before we can form a correct opinion as to the cause of constipation, with its many direful effects upon the sympathetic nervous system, in fact upon the whole body, we should know something of the anatomy and physiology of the parts concerned in this important part of our being.

Physiology teaches us that the walls of the intestinal canal have certain automatic motor centers—the plexus mesentericus of Auerbach—which lies between the longitudinal and circular muscular fibers of the canal extending from œsophagus to rectum, and influences the intestinal movements. Meissners plexus lying in the submucous coat, supplies the mucous lining of the tube as well as the smooth muscular fibers of the villii and the glands of the intestines. These two plexuses are nominally stimulated in health by these parts—in diarrhea they are over-excited and in constipation they have not the normal stimulus.

Landois and Sterling describe well the normal function as follows: "During the excretion of fæcal matter the contents of the small intestines remain in them about three hours, and about twelve hours in the large intestine, when they become less watery, and assume the character of fæces, become 'formed' in the lower part of the great intestine. The fæces are gradually carried along by the peristaltic movement until they reach a point a little above that part of the rectum which is surrounded by both

sphincters, the internal sphincter consisting of non-striped muscles, and consequently involuntary, and the external of striped muscle and hence voluntary. When the bowel has been emptied the external sphincter usually closes vigorously and remains so for some time finally relaxing, when the elasticity of the tissues about the anal opening with the two sphincters keep the anus closed.

"As long as the fæces lie above the rectum, they do not excite conscious sensations, but when the fæces pass into the rectum then the desire to go to stool occurs. At the same time the stimulation of the sensory nerves of the rectum causes reflex excitement of the sphincters.

"In order that the mass of fæces may not excite reflexly the sphincter muscles, in consequence of mechanical stimulation of the sensory nerves of the rectum, there seems to be in the brain a center which inhibits the reflex action of the sphincters, which is called into play, as it appears to voluntary impulses. When this inhibitory apparatus is in action, the fæcal mass passes through the anal outlet without causing it to close reflexly."

From all this it would seem the conditions of the rectal nervous system has much to do with the intestinal action and constipation. These rectal disorders are often promoted by hemorrhoidal accumulations, fissures, ulcers and inflammations, when the parts are in any condition to give pain. When fæcal matter is forced upon or against these sensitive parts, the patient will restrain further effort, thus causing constipation and much nervous disturbance. The past decade has made such rapid stride in the laws of nervous reflexes that a wonderland has been opened to the physician who is really progressive. Thousands of cases have been cured by giving the patient an anæsthetic and forcibly opening the bowel, and treating the local diseases which have for years in many instances been annoying and fretting the great sympathetic nervous system, and thereby liberating the impinged and fretted nerve filaments—changing the poor nervous sufferer to a healthy and happy individual.

It has been established beyond question that an abnormally tight rectal sphincter is capable of producing a nervous condition that is miserable in the extreme, and many are now constant sufferers who could be relieved by simply stretching the sphincters fully, by paralyzing them for a time, thus giving the nervous system the needed rest, by taking off the aggravating pressure and irritation.

Although the advancement has been marked and rapid along the line of reflexes, it is my opinion that we are yet in our infancy in understanding its influence in the production of diseases, and the relation the same law bears to many other disorders that we are today considering from another standpoint. I am sanguine enough to believe that the day will yet come when such conditions as scrofula, cancer and tuberculosis will have been vanquished, and instead of their being explained upon the hypothesis of the bacterial theory, they will be found to be the result of some vasomotor irregularity which might easily be controlled.

Indicanuria.

American Journal of the Medical Sciences.

Dr. Gehlig gives the following conclusions, based upon a considerable number of observations upon children both sick and well:

1. Nurslings in good health or children fed upon sterilized milk, and not the subjects of digestive troubles, sometimes present a trace of indican in the urine.

2. If digestive disturbances occur almost always some indican is found, its quantity varying with the gravity of the affection. In chronic catarrh of the intestines, cholera, and typhoid fever, it is particularly marked.

3. In older children without digestive trouble, the urine normally contains indican. If the diet includes a high proportion of nitrogenous food (eggs, meat), indican becomes more abundant.

Cima has published the results of examinations in sixty-eight cases. Most of these

children were fed simply on bread and milk, some on bouillon, vegetables and eggs, and others on mother's or cow's milk.

1. Cases of clinically declared tuberculosis of abdominal or thoracic organs—10 cases. Almost all had some irregularity of digestion, and the stools were mostly liquid or semi-fluid. In 99 analyses, 69, or 69.69 per cent. gave positive reactions, while medium or very marked reactions were given in nearly half, or 45.5 per cent. In these same cases very marked reactions were obtained after some days of feeding upon a diet richer in albuminoids, or during constipation. On the other hand, the reaction was slight or feeble when the children were put upon milk or had fluid or semi-fluid stools.

2. Cases suspected of tuberculosis, with adenopathy, chronic catarrh of intestines, or intermittent catarrh of bronchi—23 cases. In 73 analyses, 75.34 per cent. gave positive reactions, or 46.57 per cent. of medium or marked reactions.

3. Cases of divers acute and chronic diseases—35 cases. In 88 examinations, 38 were without reaction, while 30 per cent. of medium or marked reaction were given for the most part by children over two years of age nourished on a mixed diet.

The conclusion from these results is that the indican reaction in the urine is more positively connected with anomalies of digestion, especially in mixed feeding, than with the principle malady. Consequently indican has no other diagnostic importance than that of indicating the degree of decomposition of albuminoid substances in the intestines.

Obstruction of Bowel.

British Medical Journal.

A man fifty-four years old, for three months had obstinate constipation. Finally the bowels did not move for ten days; the abdomen was distended and tender; the appetite lost; and a condition of collapse existed, with sunken face, and a small, feeble pulse. The introduction of a long tube proved unavailing. An insulated sound, with a free metallic end, was introduced into the rectum, and a moistened conductor applied to the abdominal parietes, chiefly in the region of the sigmoid flexure. Through this circuit a primary Faradic current was passed, and its force gradually increased until the patient experienced a decided feeling of vibration in the bowel. In the course of the day a copious intestinal evacuation ensued, with wonderful relief to all of the symptoms. During the next two days the bowels acted ten times, and in the course of a week the patient appeared to be quite well. A like result was obtained in a second case, a woman fifty-seven years old.

MUCH has been written recently on the effect of castration for senile hypertrophy of the prostate gland. It seems to be established as a fact beyond dispute that atrophy of the prostate does occur after removal of the testicles. The question naturally arises, how does this operation produce said atrophy? May it not be that the atrophy follows, not because the testicles are removed, and hence their sexual life-ending—for it is a fact, that in the vast majority of cases, that life has already passed—but because of the injury to the nerves supplying them, said injury producing atrophy of the prostate, just as severing a nerve elsewhere will produce atrophy of the part supplied by it and sometimes by parts more or less remote? —*Hot Springs Medical Journal.*

VIRCHOW has made the following observation at the hospital of the antitoxin treatment of diphtheria. For eight weeks all cases were treated with the serum and there were fifty-five recoveries and eight deaths. For the next seven weeks all cases were treated by the usual methods, without the serum, and there were fifty-four recoveries and fifty-five deaths. In the next six weeks all cases were treated with the serum again, with sixty-nine recoveries and twelve deaths. He claims these results as proof positive of the benefit of this method.—*Chicago Medical Record.*